

SHMAROV, Nikolay Aleksandrovich; TSETNARSKIY, I.A., otvetstvennyy redaktor;  
ARZAMASOV, N.A., redaktor izdatel'stva; KOROVENKOVA, Z.A., tekhnicheskiy redaktor;  
PROZOROVSKAYA, V.L., tekhnicheskii redaktor

[Mechanization of mining] Mekhanizatsiya gornykh rabot. Moskva,  
Ugletekhizdat, 1957. 341 p. (MLRA 10:8)  
(Coal mining machinery)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0

SHMAROV, N.A.

A reader's letter. Shakht. stroi. no.7:32 '58. (MIRA 11:9)  
(Mining engineering--Periodicals)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0"

SHMAROV, N.

Serious gaps in a useful book ("Modern machines for coal mining."  
by P.I. Rappoport and A.I. Gornopol'skii. Reviewed by N. Shmarov).  
Mast. ugl. 8 no.5:29 My '59. (MIRA 12:8)  
(Bibliography--Coal mines and mining)  
(Rappoport, P.I.) (Gornopol'skii, A.I.)

SHMAROV, N.A., inzh.

Introduce new means for dust control in mines. Bezop. truda v prom. 4  
no.6:1-4 Je '60. (MIRA 14:3)  
(Mine dusts)

SHMAROV, N.

"Operator and mechanic of coal cutter loaders" by A.A.Talyshov.  
Reviewed by N.Shmarov. Mast.ugl. 9 no.3:27 Mr '60.  
(MIRA 13:6)

(Coal mining machinery)  
(Talyshov, A.A.)

SHELEPOV, V.A., inzh.

New means for fighting coal and rock dust. Bezop. truda v  
prom. 5 no.10:19-21 O '63. (MFA 14:10)  
(Mine dusts--Safety measures)

SEMABOV, N.A., inzh.

New spraying device. Bezop. truda v prom. 6 no. 7:33 Jl '62.  
(MIRA 15:7)  
(Sprinklers)

SHMAROV, N.A.

New equipment manufactured by the Ufa factory. Gor. zhur.  
no.6:68-69 Je '62. (MIRA 15:11)

1. Vsesoyuznyy tsentral'nyy gosudarstvennyy institut po  
proyektirovaniyu shakht, Moskva.  
(Ufa--Ore dressing--Equipment and supplies)

SHMAROV, N.A., inzh.

Making intermediate shanks by means of drilling out coal. ~~Besop. truda~~  
v prom. 7 no.1:27-28 Ja '63. (MIRA 16:2)

1. Vsesoyuznyy tsentral'nyy gosudarstvennyy institut po proyektirovaniyu  
i tekhniko-ekonomiceskim obosnovaniyam razvitiya ugol'noy promyshlennosti.  
(Coal mines and mining)

SHMAROV, N.A., inzh.

Vibration-damping carriages for drilling machines. Bespop. truda  
v prom. 7 no.3:33 Mr '63. (MIRA 16:3)  
(Boring machinery--Vibration)

BERMUDA, W.I., British.

New York station's machine for central mine flooding valve, Giselle,  
atmos. C no. 7700-7-31-100. (NSA 1016)

1. Neospruznyy terminal'nyy gosudarstvennyy instrument po proyektirovaniyu  
i testirovaniyu eksplosivnykh sredstv v zemlyakh i vodoprovodnoy promyshlen-  
nosti.

KUDYMOV, B.Ya., SHMAROVA, V.I.

Relation between the membrane potential of rocks and the mobility  
of ions in the membrane. Prikl. geofiz. no.26:218-223 '60.  
(MIRA 13:8)

(Rocks--Electric properties)  
(Ions--Migration and velocity)

SIMAROWA, V. P.

With Kozina, Z. K. "Relations Between the Amplitude of Deflections in the Resistivity Curve and Specific Resistivities of the Well Water and Drilling Mud Filtrate."

p. 206 in book Applied Geophysics; Collection of Articles, No. 89, Moscow Gostoptekhnizdat, 1958, 267p.

These articles are concerned with the methodology of interpreting the results of gravimetric, seismic and electrical surveys. Review the collecting properties of rocks on the basis of data obtained from resistometers and the application of charged particle accelerators in well logging.

KOZINA, Z.K.; SHMAROV, V.P.

Relation of the deviation amplitude of the PS curve to the specific  
resistance of formation water and the drilling fluid filtrate.  
Prikl.geofiz. no.20:206-214 '58. (MIRA 11:11)  
(Oil well logging, Electric)

VASIL'YEV, V.G.; GRACHEV, G.I.; NEVOLIN, N.V.; OZERSKAYA, M.L.; PODOBA,  
N.V. Prinimali uchastiye: ALEKSEYCHIK, S.N.; GUSHKOVICH, S.N.;  
DIKENSHTEYN, G.Kh.; DZVELAYA, M.F.; DRABKIN, I.Ye.; IVANOVA,  
M.N.; KAZARIHOB, V.P.; KALININA, V.V.; KOZLENKO, S.P.; MEDVEDEV,  
V.Ya.; PUSTIL'NIKOV, M.R.; ROSTOVTSEV, N.N.; SKOBLIKOVA, G.I.;  
STEPANOV, P.P.; TITOV, V.A.; FOTIADI, E.E.; CHIRVINSKAYA, M.V.;  
~~SHMAROVA, V.P.~~ GRATSIANOVA, O.P., red.; BEKMAN, Yu.K., vedushchiy  
red.; MUKHINA, E.A., tekhn.red.

[Manual for geophysicists in four volumes] Spravochnik geofizika  
v chetyrekh tomakh. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-  
toplivnoi lit-ry. Vcl.1. [Stratigraphy, lithology, tectonics,  
and physical properties of rocks] Stratigrafiia, litologija,  
tektonika i fizicheskie svoistva gornykh porod. Pod red. O.P.  
Gratsianovi. 1960. 636 p. (MIRA 14:1)  
(Petroleum geology) (Gas, Natural--Geology)

KOMAROV, S.G.; SHMAROVA, V.P.

Membrane potential of clay. Prikl. geofiz. no.31:288-293 '61.  
(MIRA 15:3)  
(Clay--Electric properties)

SHMAROVZ, G., geroy Sovetskogo Soyuza

The brigade has started the pre-Congress watch. Stroitel' no.4:15  
Ap '61. (MIRA 14:5)

1. Brigadir kollektiva kommunisticheskogo truda tresta  
Krasnodarstroy.  
(Krasnodar--Masonry)

~~SECRET~~  
GLADKIKH, M.A., inzhener; SHMAROVZ, V.I., inzhener.

Testing a power transformer produced by FEM. Elek.sta. 28 no.1:80-  
81 Ja '57. (MIRA 10:3)  
(Austria--Electric transformers)

PONOMAREV, P.M., inzh.; SHMAROVZ, V.I., inzh.

Tests in the maintenance of 110-kv. overhead power transmission  
lines with two-circuit single poles. Elek. sta. 34 no.8:73 Ag  
'63. (MIRA 16:11)

SHMARTS, V. L.  
USSR/Physics-Thermal Expansion

FD-737

Card 1/1 : Pub 146-7/22

Author : Shmarts, V. L.

Title : Thermal expansion of crystals

Periodical : Zhur. cksp. i teor. fiz., 27, 62-68, Jul 1954

Abstract : Formulas for derivation of coefficients of linear expansion of metals and ionic crystals are derived using simple concepts by Ya. I. Frenkel' (Vvedeniye v teoriyu metallov [Introduction to the theory of metals, 1950]). Correlations between heat capacity, expansion coefficient and lattice parameter are established by generalizing E. Grueneisen's law (Ann. d. Phys., 26, [1908]). Indebted to Prof. B. N. Finkelsteyn and A. F. Kirpichev. 7 references including 3 foreign.

Institution : Dnepropetrovsk State University

Submitted : August 15, 1953

SHMARTS,V.L., inzhener; ZAYDLIN.G.S.; FEDORENKO,V.N.

Preparation of a magnetic suspension. Vest.mash.35 no.8:64-66  
Ag'55. (MLRA 8:10)

(Magnetic testing)

126-1-35/40

AUTHOR: Shmarts, V. L.

TITLE: On determining the recrystallisation temperature of metals.  
(Ob opredelenii temperatur rekristallizatsii metallov).

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol.5, No.1,  
pp. 182-184 (USSR).

ABSTRACT: Bochvar (Ref.1) has shown that the temperature of initial recrystallisation is approximately 0.4 times the melting temperature and this indicates that there is a relation between fusion and recrystallisation and, on this basis, it is possible to derive a new relation for the crystallisation temperature. It can be assumed that at the melting temperature the amplitudes of thermal oscillations of the atoms reach a critical value. However, the atoms can move freely throughout the entire volume of the metal only after receiving additional energy, namely, the fusion heat. At any temperatures atoms exist in the metal which oscillate with a critical amplitude and by receiving the fusion heat such atoms may escape from the nodes of the crystal lattice and move throughout the entire volume of the metal. On reaching the surface they will give rise to new crystal nuclei. The free displacement of groups of atoms in

Card 1/2

AUTHOR: Shmarts, V. L.

126-5-3-26/31

TITLE: The Ponderomotor Force Between a Magnet and a Ferromagnetic Material (Ob opredelenii ponderomotornoy sily vzaimodeystviya magnita i ferromagnetika)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol 5, Nr 3, pp 556-558 (USSR)

ABSTRACT: Grinberg's method (Ref.2) in magnetostatics is applied to a sphere of radius  $r_0$  of permeability  $\mu_1$  magnetized by a uniform field  $H_0$  (the magnet) acting on a ferromagnetic of permeability  $\mu_3$  filling a semi-infinite space  $Z < 0$ . The space between magnet and ferromagnetic is filled by a nonmagnetic medium of permeability  $\mu_2$ . If the ferromagnetic is absent the Lorenz potentials of magnet ( $\phi_1$ ) and nonmagnetic medium ( $\phi_2$ ) are given by Eqs.(1); if the ferromagnetic is present its potential ( $\phi_3$ ) is given by Eq.(2). The coordinates used are bipolar; the relations to the Cartesian ones are given. The rest of the development is straightforward.

Card 1/1 There are 5 references, all of which are Soviet.

SUBMITTED: February 18, 1957 1. Magnets--Magnetic properties 2. Ferromagnetic

AVAILABLE: materials--Magnetic effects 3. Mathematics

27629  
S/194/61/000/002/004/039  
D216/D302

1860

AUTHOR: Shmarts, V.L.  
TITLE: An electromagnetic thickness gauge MT-~~A43~~ (MT-DAZ)  
PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,  
no. 2, 1961, 21, abstract 2 A149 (Tr. in-ta fiz.  
metallov AN SSSR, no. 21, 1959, 111-123)

TEXT: The theory is given of the interaction between the magnet and the component when using a magnetic thickness gauge for measuring the thickness of coatings. The means of avoiding error, common to this type of instrument, is determined, the error being due to considerable influence of the properties of the component on the results of measurements. The instrument MT-~~A43~~ (MT-DAZ) is described as used for measuring the thickness of ferromagnetic materials, in which instrument this error is absent. This is achieved by applying a different visual method of magnetic measurement. The thickness of coating is determined from the magnitude of an alter-

Card 1/2

An electromagnetic thickness gauge...

27629  
S/194/61/000/002/004/039  
D216/D302

nating current required to break-off a needle-shaped core of a special electro-magnet from the coated component. The instrument consists of an electromagnetic sensing device with a conical winding and a needle-shaped core and standard assemblies consisting of: an autotransformer LATP-2 (LATR-2), mains transformer AMO-50, milliammeter 0-250 mA with a scale calibrated in microamps and a signal-bulb for marking the instant of break-off between the component and the coating. The results of successful trials of the instrument are given. 6 figures. 10 references.



Card 2/2

SHMARTSEV, Yu V.

PHASE I BOOK EXPLOITATION

1185

Poluprovodnikovyye pribory i ikh primeneniye; sbornik statey, vyp.  
II (Semiconductor Devices and Their Uses; Collection of  
Articles, no. 2) Moscow, Izd-vo "Sovetskoye radio," 1957. 398 p.  
No. of copies printed not given.

Ed. (title page): Fedotov, Yakov Andreyevich; Ed. (inside book):  
Ivanushko, N.D.; Tech. Ed.: Sveshnikov, A.A.

PURPOSE: This book is addressed to physicists and electronics  
engineers interested in semiconductor devices and their applica-  
tions in electronics.

COVERAGE: This is a collection of articles on semiconductor devices  
and their applications. There is an insert containing a circuit  
diagram of the measuring instrument described in the article on  
p. 331. No personalities are mentioned. There are 84 references,  
of which 33 are Soviet (including 3 translations), 1 Swiss, 6  
German, 42 English, and 2 French.

Card 1/5

Semiconductor Devices and Their Uses (Cont.) 1185

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Card 4/5

SHMARTSEV, Yu.V.

Obtaining germanium for semiconductor radio-engineering instruments.  
Poluprov. prib. i ikh prim. no.2:3-45 '57. (MIRA 11:6)  
(Germanium) (Radio measurements)

24(6)

AUTHORS: Tuchkevich, V. M., Shmartsev, Yu. V. SOV/57-58-12-9/15

TITLE: On the Problem Hall Coefficient Dependence on the Strength of the Magnetic Field in p-Type Germanium (K voprosu o zavisimosti koeffitsiyenta Kholla ot napryazhennosti magnitnogo polya v germanii p-tipa)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Nr 12, pp 2707-2710 (USSR)

ABSTRACT: In the paper cited by reference 5 a theory of the dependence of the Hall coefficient on the strength of the magnetic field was laid down. In the calculations carried out there an agreement of the theoretical calculations with experimental data could be reached. In this instance the variation of the mobility of light and heavy holes in an external magnetic field was taken account of. As, however the change in concentration could also be the reason for the dependence of the Hall coefficient on the strength of the magnetic field; this means a decrease in concentration of the light holes together with an increase in concentration of the heavy holes so that the sum of their concentrations remains constant:  $p_L + p_H = \text{constant}$ . This phenomenon may be due to a separation of the valence zones of light and heavy holes under the action

Card 1/3

On the Problem Hall Coefficient Dependence on the  
Strength of the Magnetic Field in p-Type Germanium

SOV/57-58-12-9/15

of an external magnetic field. Therefore a certain activation energy for the formation of light holes will occur. Formula (12) for the ratio of the concentrations of light and heavy holes is written down. To simplify this formula the dependence of the charge carrier motion on the magnetic field is neglected. It can be shown that this assumption does not change the qualitative course of the dependence of the Hall coefficient on the strength of the magnetic field. This is very well admissible under conditions assumed in the present case for a rough calculation. From formula (10) (Ref 5) formula (13) is obtained for the Hall coefficient. It is shown that theory and experiment disagree very much. Therefore more exact theoretical considerations concerning the choice of the ratio between light and heavy holes  $\mu_L^0 / \mu_H^0$  are necessary. In order to carry out quantitative calculations and to compare the theory with the experiment also the course taken by the function  $\Delta E (\mathcal{H})$  must be determined.  $\mathcal{H}$  denotes the field and  $\Delta E$  - the activation energy of light holes. There are 4 figures and 13 references, 1 of which is Soviet.

Card 2/3

On the Problem Hall Coefficient Dependence on the  
Strength of the Magnetic Field in p-Type Germanium

SOV/57-58-12-9/15

ASSOCIATION: Leningradskiy fiziko-tehnicheskiy institut AN SSSR  
(Leningrad Physical and Technical Institute, AS USSR)

SUBMITTED: April 21, 1958

Card 3/3

PHASE I BOOK EXPLOITATION

SOV/4817

Fedotov, Yakov Andreyevich, and Yuriy Vasil'yevich Shmartsev  
Tranzistory (Transistors) Moscow, Izd-vo "Sovetskoye radio," 1960. 429 p. No.  
of copies printed not given.

Ed.: N.Ya. Arenberg; Tech. Ed.: B.V. Smurov.

PURPOSE: This book is intended for students of advanced courses at radio-engineering departments of schools of higher education and for engineers concerned with developing and designing transistorized circuits.

COVERAGE: The authors discuss basic physical processes connected with transistors, analyze problems of semiconductor conductivity, and describe the technology of semiconductor materials such as germanium and silicon. Consideration is given to the measurement of semiconductor parameters which are important in the manufacturing processes of semiconductor devices. The book contains detailed information relating to contact phenomena in semiconductors, principles of semiconductor-device operation in radio-engineering equipment, and the relationships between basic parameters of a device with physical magnitudes determining the electronic processes in the device. The book includes discussions on equivalent transistor circuits operated at low and high frequency. The dependence of

Card 1/6.

Negative magnetoresistivity in hexagonal, n-type silicon carbide.  
V. Mirzabayev, V. M. Tuchkevich, Yu. V. Shmatsev (10 minutes).

Structure and electrical properties of the system CdSe-HgSe.  
M. V. Kot, V. A. Mshenskiy.

Structure and electrical properties of the system HgTe-ZnTe.  
S. A. Danilyuk, M. V. Kot.

Structure and electrical properties of the system ZnSe-HgSe.  
M. V. Kot, A. V. Simashkevich.

Report presented at the 3rd National Conference on Semiconductor Compounds,  
Kishinev, 16-21 Sept 1963

MIRZABAYEV, M.; TUCHKEVICH, V.M.; SHMARTSEV, Yu.V.

Negative magnetoresistance in germanium heavily alloyed  
with antimony. Fiz. tver. tela 5 no.6:1625-1629 Je '63.  
(MIRA 16:7)

I. Fiziko-tehnicheskiy institut imeni A.F. Ioffe AN SSSR,  
Leningrad.

L 44537-65 EWT(1)/EWP(e)/EWT(m)/EPF(n)-2/EWG(m)/EPR/T/EWP(t)/EWP(b)/EWA(h)  
Pz-6/Ps-4/Peb/Pu-4 IJP(c) JD/JG/AT  
ACCESSION NR AM5012950

BOOK EXPLOITATION

56  
B+1 UR/

Shmartsev, Yury Vasil'yevich; Valov, Yury Aleksandrovich; Borshchevskiy,  
Aleksandr Semenovich

Refractory adamantine semiconductors (Tugoplavkiye almazopodobnyye poluprovodniki)  
[Moscow] Izd-vo "Metallurgiya", 64. 0207 p. illus., biblio. Errata slip  
inserted. 3,570 copies printed.

TOPIC TAGS: semiconducting material, semiconductor device, high temperaturas metal,  
diamond, boron, aluminum, gallium, indium

27 27 27 27 27

PURPOSE AND COVERAGE: This book acquaints the reader with a series of perspectives dealing with the radioelectronics of semiconducting materials belonging to the broadest group of semiconductors, the diamond-like group. The semiconductors examined in this book are those whose production has been described in our own and in foreign literature. Detailed descriptions of these materials are given in individual chapters. These chapters contain the fundamental principles of physics, chemistry and technology of semiconductors. This book is intended for scientists, engineers and technicians, working in the field of semiconducting materials production, production and use of semiconductor apparatus and for students enrolled in advanced courses at the institutions of higher education.

Card 1/2

L 44537-65  
ACCESSION NR AM5012950

0

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Ch. I The fundamental concepts of the physics of semiconductors -- 9

Ch. II Desired qualities of semiconducting materials in relation to their application -- 47

Ch. III The periodic system of elements -- 58

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Ch. V The production and properties of high temperature semiconducting materials -- 103

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SUBMITTED: 17Oct64

SUB CODE: EC

NO REF SOV: 062

OTHER: 260

*mc*  
Card 2/2

ACCESSION NR: AP4028450

S/0181/64/006/004/1186/1191

AUTHORS: Kalyuzhnaya, G. A.; Okeman, Ya. A.; Smirnov, V. N.; Shmartsev, Yu. V.

TITLE: Investigation of photoconductivity in gallium phosphide by the noncontact method

SOURCE: Fizika tverdogo tela, v. 6, no. 4, 1964, 1186-1191

TOPIC TAGS: photoconductivity, gallium phosphide, high frequency method, temperature dependence, noncontact method

ABSTRACT: The authors measured the temperature dependence of photoconductivity in poorly conductive GaP. They also determined the spectral distribution of the photoconductivity at different temperatures. These relations are shown graphically in Fig. 1 on the Enclosure. A short-wave maximum is observed, associated with direct transitions. The photoconductivity is found to drop sharply at temperatures below 64K. It is concluded that the use of high-frequency methods for investigating photoconductivity is justified by the reproducibility of the results and by the agreements of these results with data from the literature. The method has led to refinement of several properties of GaP and, in particular has confirmed the

Card 1/3

ACCESSION NR: AP4028450

ENCLOSURE: 01

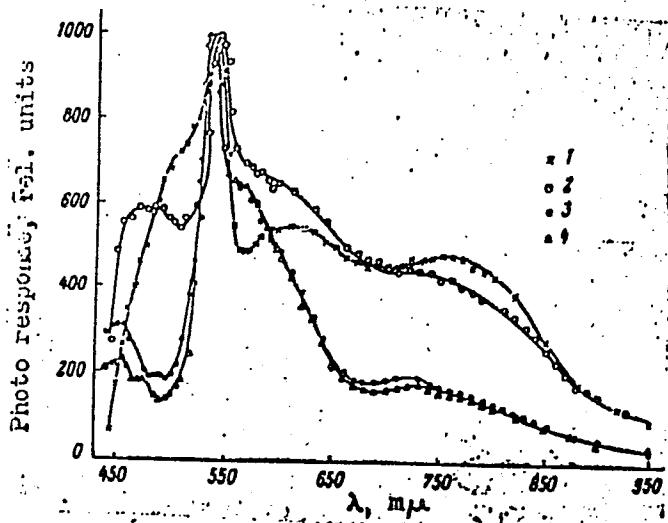


Fig. 1. Spectral distribution of photoconductivity in GaP at various temperatures

1,2- 214K; 3- 174K;  
4- 96K; 1- modulated  
light; 2-4- nonmodulated  
light.

Card 3/3

L 8489-65 EWT(m)/EPF(n)-2/EPR/EWP(q)/EWP(b) Ps-4/Pu-4 ASD(m)-3/AFWL/  
AS(mp)-2/ESD(gs)/ESD(t)/RAEM(t) JD/JG/AT/WH

ACCESSION NR: AP4044938

S/0181/64/006/009/2673/2682

AUTHOR: Iglitsyn, M. I.; Mirzabayev, M.; Tuchkevich, V. M.;  
Fedotova, Ye. F.; Shmartsev, Yu. V.

TITLE: Galvanomagnetic phenomena in n-type silicon carbide at low  
temperatures

SOURCE: Fizika tverdogo tela, v. 6, no. 9, 1964, 2673-2682

TOPIC TAGS: silicon carbide, n type silicon carbide, galvanomagnetic  
property, electrical resistivity, Hall coefficient, magnetoresistance

ABSTRACT: Electrical resistivity, Hall coefficient, and, for the first  
time, magnetoresistance have been measured at 1.5—290 K for n-type  
hexagonal  $\alpha$ -SiC with a free carrier concentration of  $10^{18} \text{ cm}^{-3}$ . Green  
transparent SiC single crystals grown by the Lely method were used.  
It was shown that at low temperatures phenomena occur in SiC which  
are characteristic of impurity conductivity. The negative magneto-  
resistance showed an anomalous considerable angular dependence. Orig.  
art. has: 2 tables, 9 figures, and 3 formulas.

Card 1/2

L 8489-65

ACCESSION NR: AP4044938

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe AN SSSR,  
Leningrad (Physicotechnical Institute, AN SSSR); Gosudarstvennyy  
nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy  
promyshlennosti, Moscow (State Scientific Research and Design Insti-  
tute of the Rare-Metal Industry)

SUBMITTED: 31Mar64 ATD PRESS: 3108 ENCL: 00

SUB CODE: IC, EM NO REF Sov: 005 OTHER: 026

Card 2/2

L 16337-65 EWT(1)/EPA(s)-2/EWT(m)/EWP(t)/EWP(b) Pt-10/Pi-4 IJP(c)/  
ESD(gs)/SSD/AFWL JD

S/0181/64/006/012/3718/3721

ACCESSION NR: AP5000682

AUTHORS: Mirzabayev, M.; Tuchkevich, V. M.; Shmartsev, Yu. V.

B

TITLE: Piezo- and magnetoresistance in n-type germanium

a7

SOURCE: Fizika tverdogo tela, v. 6, no. 12, 1964, 3718-3721

TOPIC TAGS: germanium, magnetoresistance, piezoresistance, spin, impurity center

ABSTRACT: The authors measured the piezoresistance of dislocation-free samples of n-type germanium doped with antimony, with carrier densities from  $2 \times 10^{17}$  to  $8 \times 10^{17} \text{ cm}^{-3}$ , under tensile stresses from  $9 \times 10^6$  to  $3 \times 10^8 \text{ dyn/cm}^2$ . The magnetoresistance of the same samples was measured at 4.2K in magnetic fields up to 16.5 kG, with an attempt to finding a correlation between the two phenomena. Both the piezoresistance and magnetoresistance have negative values at low fields and low tensile stresses, pass through a minimum, and

Card 1/3

L 16337-65

ACCESSION NR: AP5000682

then reverse sign and increase with the field and the stress. Some samples showed a saturation of the piezoresistance and magnetoresistance. The observed similarity in the behavior of the negative piezoresistance of negative magnetoresistance is in qualitative agreement with the hypothesis that the dynamic and statistical fluctuations of the localized spin moments are suppressed by application of an external magnetic field. The decrease in resistivity under uniaxial tension may be due to the suppression of the dynamic fluctuations of the localized spins by the increase in the internal magnetic field in the crystal under the influence of the mechanical stress, or else by the change in the relative concentration of the magnetic centers due to the change in the degree overlap of the wave functions of the impurity centers. The latter explains why one sample showed an increase in the absolute value of the magnetoresistance with increasing tension, while another sample did not show such an influence. Orig. art. has: 2 figures and 1 table.

Card 2/3

L 16337-65

ACCESSION NR: AP5000682

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe AN  
SSSR (Physicotechnical Institute AN SSSR)

SUBMITTED: 07Jul64

SUB CODE: SS,EM

NR REF SOV: 002

ENCL: 00

OTHER: 006

Card 3/3

L 12949-65EWP(e)/EWT(m)/EPF(n)-2/EPR/EWP(b) Ps-4/Pu-4 JD/JG/AT/WH  
S/0048/64/028/008/1300/1305

ACCESSION NR: AP4044641

AUTHOR: Mirzabayev, M.; Tuchkevich, V. M.; Shmartsev, Yu. V.

TITLE: Negative magnetoresistance of hexagonal n-type silicon carbide

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v. 28, no. 8, 1964, 1300-  
1305

TOPIC TAGS: silicon carbide crystal, n type silicon carbide, hexagonal silicon carbide, alpha silicon carbide, electrical property, negative magnetoresistance, doped silicon carbide.

ABSTRACT: The negative magnetoresistance at low temperature previously observed in various semiconductors has been investigated in the 1.4—290K range in nitrogen-doped  $\alpha$ -SiC n-type crystals to check a hypothesis associating the phenomenon with highly doped semiconductors displaying the predominant extrinsic conductivity. All galvanomagnetic measurements were carried out by the d-c potentiometric method on samples rotated 360° in the magnetic field. The data on resistivity,  $\rho$ , Hall constant, carrier concentration, and electron mobility at 4.2K and 290K are tabulated for samples of various dimensions. <sup>B</sup> <sup>v1</sup> <sup>v2</sup>

Card 1/2

L 12949-65

ACCESSION NR: AP4044641

3

Temperature dependence of  $\rho$  and the Hall constant was shown to be exponential for all samples but one, which was weakly compensated. The plots show a high impurity concentration in the SiC samples and an appearance of negative magnetoresistance at low temperatures. The magnetic field intensity dependence of the negative magnetoresistance in all samples but one was the same as in germanium or silver+manganese alloys. A pronounced dependence of the negative magnetoresistance on the angle between the vector directions of current density and magnetic induction does not agree with the theory of interaction between the electrons of the impurity band and the spin moments. Orig. art. has: 2 tables and 7 figures.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: SS, MT

ATD PRESS: 3097

NO REF Sov: 001

ENCL: 00

OTHER: 006

Card 2/2

L 3911-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD  
ACCESSION NR: AP5018743

UR/0020/65/163/002/0338/0339

29

B

AUTHOR: Mirzabayev, M.; Tuchkevich, V. M.; Shmartsev, Yu. V.

TITLE: Negative magnetoresistance in n-type silicon

SOURCE: AN SSSR. Doklady, v. 163, no. 2, 1965, 338-339

TOPIC TAGS: silicon, semiconductor carrier, magnetoresistance

ABSTRACT: In view of the scanty amount of published data on the subject, the authors measured the magnetoresistance of n-type silicon by a standard dc potentiometer method, in magnetic fields up to 16.5 kG. The measurements accurate to +0.01%, were made on samples of doubly-cruciform shape at temperatures 4.2 and 1.70K. Typical plots of the negative magnetoresistance against the electron density are shown in Fig. 1 of the enclosure. The higher values of magnetoresistance observed by H. Roth et al. (Phys. Rev. Lett. v. 11, 328, 1963) are attributed to the presence of uniaxial tension in their sample. This report was presented by V. P. Konstantinov. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe AN SSSR (Physicotechnical Institute AN SSSR)

Card 1/3

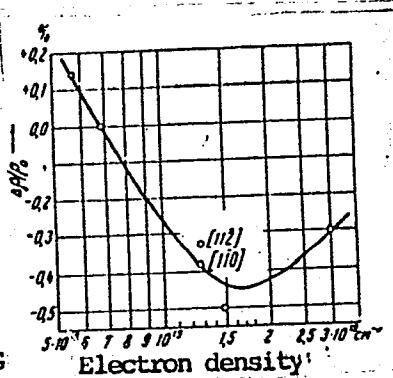
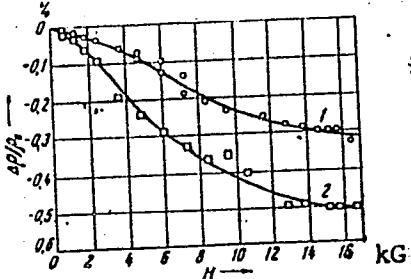
L 3911-66  
ACCESSION NR: AP5018743  
SUBMITTED: 12Dec64  
NR REF Sov: 000

ENCL: 01  
OTHER: 002

SUB CODE: SS

Card 2/3

L 3911-66  
ACCESSION NR: AP5018743



ENCLOSURE: 01

Fig. 1. Dependence of the negative magnetoresistance of n-type silicon on the magnetic field intensity (left) and on the carrier density (right).

Card 3/3

L 11893-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(s) JD/GG  
ACC NR: AT6002249 SOURCE CODE: UR/2564/65/006/000/0193/0198

AUTHOR: Golubev, L. V., Tuchkevich, V. M., Shmartsev, Yu. V.

48  
Q+1

ORG: none

TITLE: Growing of heavily doped dislocation free germanium single crystals

SOURCE: AN SSSR. Institut kristallografii. Rost kristallov, v. 6, 1965, 193-198

TOPIC TAGS: single crystal growing, germanium single crystal, antimony, gallium, crystal dislocation

ABSTRACT: After discussing the effect of the conditions of growing single crystals by Czochralski's method on the dislocation density, the authors discuss the technique which they used to grow germanium single crystals doped with Sb or Ga and relatively free of dislocations. Two types of apparatus were employed: one for growing small-diameter crystals in a hydrogen atmosphere, and another for growing crystals up to 30 mm in diameter in a vacuum. The dislocation density was measured with an MBI-6 microscope after alkaline etching of polished sections. Fifteen germanium single crystals containing impurities in concentrations from  $10^{17}$  to  $10^{19} \text{ cm}^{-3}$  for Sb and from  $10^{17}$  to

Card 1/2

L 11893-66

ACC NR: AT6002249

*J*  
 $6 \times 10^{19} \text{ cm}^{-3}$  for Ga were grown. The dependence of dislocation mobility on the concentration of Sb in Ge was studied at 290 and 4.2K. The mobilities observed at 4.2K, up to  $1100 \text{ cm}^2/\text{V sec}$  in samples with impurity concentrations in excess of  $10^{18} \text{ cm}^{-3}$ , were the highest of all obtained thus far. Orig. art. has: 5 figures and 2 formulas.

SUB CODE: 20// SUBM DATE: none / ORIG REF: 013 / OTH REF: 017

*PC*  
Card 2/2

L 9572-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD  
ACC NR: AP5027440 SOURCE CODE: UR/0181/65/007/011/3437/3439

AUTHOR: Mirzabayev, M.; Tuchkevich, V. M.; Shmartsev, Yu. V.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR, Leningrad (Fiziko-tehnicheskiy institut AN SSSR)

TITLE: Piezomagnetoresistance in n-germanium

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3437-3439

TOPIC TAGS: germanium, piezomagnetic effect, magnetoresistance

ABSTRACT: Magnetoresistance is studied as a function of compressive mechanical stress up to  $8 \cdot 10^8$  dynes $\cdot$ cm $^{-2}$  in an antimony-doped specimen of germanium with an electron concentration of  $1.74 \cdot 10^{17}$  cm $^{-3}$ . Curves are given showing the effect of compressive mechanical stress on magnetoresistance and the effect of a magnetic field on piezoresistance. It was found that magnetoresistance increases with mechanical stress up to  $2.5 \cdot 10^8$  dynes $\cdot$ cm $^{-2}$  and becomes negative at higher stresses, approaching saturation as the magnetic field strength is increased. A transition to negative magnetoresistance takes place in the specimen at compressive stresses greater than  $5 \cdot 10^8$  dynes $\cdot$ cm $^{-2}$ . Orig. art. has: 2 figures, 2 formulas.

SUB CODE: 20/

SUBM DATE: 10Jun65/

ORIG REF: 001/

OTH REF: 005

beck  
Card 1/1

L 29954-66

ACC NR: APG012478

SOURCE CODE: UR/0181/66/c08/004/1159/1164

AUTHOR: Sikharulidze, G. A.; Tuchkevich, V. M.; Ukhakov, Yu. I.; Shmartsev, Yu. V.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tehnicheskiy institut AN SSSR)

TITLE: Optical and magneto-optical phenomena in CdSnAs<sub>2</sub>

SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1159-1164

TOPIC TAGS: optic activity, cadmium compound, tin compound, arsenic compound, Hall effect, electric conductivity, absorption spectrum, magnetooptic effect, light polarization, light scattering, phonon scattering

ABSTRACT: The authors investigated the absorption and reflection spectra, the optical activity, and the birefringence of infrared radiation in the wavelength range 3-20  $\mu$ . The CdSnAs<sub>2</sub> crystals were obtained by directional crystallization and by zone growing with primer, from a melt synthesized in a quartz ampoule in an argon atmosphere. The Hall effect and the electric resistivity were measured in the temperature range 78-450K. Both n- and p-type crystals were measured. The reflection from samples with intrinsic conductivity (p-type,  $n = 6.25 \times 10^{16} \text{ cm}^{-3}$ ) was practically independent of the wavelength. Samples with other impurity densities (n-type,  $n = 2.6 \times 10^{18} \text{ cm}^{-3}$  and  $3.5 \times 10^{18} \text{ cm}^{-3}$ ) showed minima at  $\sim 14.4$  and  $12.5 \mu$ . At 130K, the reflection spectrum exhibited a minimum near  $13 \mu$  with and without a magnetic field. The absorption spectra showed a more complicated spectral dependence, wherein the short-wave

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B

Card 1/2

L 29954-66

ACC NR: A6012478

absorption depended little on the orientation of the plane of polarization, whereas the absorption spectrum in the region 0.16-0.30 ev changed appreciably with rotation of the plane of polarization. The measurements were made at 130 and 295K without and with a magnetic field (up to 25 KG). At 295K the width of the forbidden gap was  $0.25 \pm 0.01$  ev, the dielectric constant of the lattice was  $13.7 \pm 0.6$ . The Faraday effect was investigated in the wavelength range  $4-11 \mu$  at 130 and 295K, from which the mean value of the effective mass near the Fermi level was determined ( $0.042 \pm 0.005$ ) $m_0$ . The wavelength dependence of the absorption coefficient was of the power-law type with exponent  $-(2.50 \pm 0.07)$ , indicating that the predominant scattering mechanism at room temperature is scattering by optical phonons. The authors thank Yu. V. Mal'tsev for great help with the work. Orig. art. has: 4 figures, 4 formulas, and 2 tables.

0  
SUB CODE: 20/ SUBM DATE: 04Sep65/ ORIG REF: 004/ OTH REF: 014

Card 2/2 (b)

L 41597-66 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD  
ACC NR: AP6018550 SOURCE CODE: UR/0181/66/008/006/1851/1858

AUTHOR: Polyanskaya, T. A.; Sikharulidze, G. A.; Tuchkevich, V. M.; Shmartsev, Yu. V.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tehnicheskiy institut AN SSSR)

TITLE: Galvanomagnetic phenomena in CdSnAs<sub>2</sub>

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1851-1858

TOPIC TAGS: cadmium compound, galvanomagnetic effect, magnetoresistance, energy band structure, conduction band, electron interaction, phonon interaction

ABSTRACT: The purpose of the work was to investigate galvanomagnetic phenomena in both n- and p-type samples in a broader temperature interval than in the past, so as to obtain information on certain parameters of the band structure and on the carrier scattering mechanisms in CdSnAs<sub>2</sub>. The measurements were made on two n-type and two p-type single-crystal samples in the temperature interval from 1.3 to 450K, by a dc potentiometric method, using a system of glass cryostats in a magnetic field up to 12 kG. Analysis of the results shows that the experimental data do not contradict the theoretical ideas concerning the structure of the conduction band. It is assumed that the predominant scattering mechanism at T > 300K is interaction between electrons and optical phonons. The effective mass of the holes is found to be  $m_p^* \approx 0.1m_0$ , and the mobility ratio  $b = \mu_n/\mu_p = 25$  (at T = 300K). It is proposed that at low temperatures, appreciable contribution to the electric conductivity of p-type samples is

Card . 1/2

L N1557-66

ACC NR: AP6018550

made by fast holes. This assumption agrees with the experimentally observed complicated dependence of the magnetoresistance on the magnetic field induction. The authors thank A. Ya. Vul for great help with the measurements. Orig. art. has: 7 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 22Nov65/ ORIG REF: 006/ OTH REF: 010

Card 2/2

ACC NR: AP7001892

SOURCE CODE: UR/0020/66/171/004/0830/0832

AUTHOR: Borshchevskiy, A. S.; Goryunova, N. A.; Sikharulidze, G. A.; Tuchkevich, V. M.; Shmartsev, Yu. V.

ORG: Physicomathematical Institute im. A. F. Ioffe, Akademii nauk SSSR (Fiziko-matematicheskiy institut im. A. F. Ioffe, Akademii nauk SSSR)

TITLE: Preparation and some properties of CdSnAs<sub>2</sub> semiconductor compound

SOURCE: AN SSSR. Doklady, v. 171, no. 4, 1966, 830-832

TOPIC TAGS: cadmium tin arsenide, arsenide single crystal, single crystal growing, single crystal property, zone refining

ABSTRACT: A method for growing crack-free CdSnAs<sub>2</sub> single crystals is described. The synthesis was carried out in a quartz ampoule and pure-argon atmosphere at a stoichiometric proportion of components and a temperature of 750°C. The obtained compound was then zone refined. Crystals up to 7 cm long and about 1 cm in diameter were grown from the zone-refined ingot by zone melting at 585—589°C with a molten zone speed of 0.8 cm/hr. The respective properties of the specimens cut from the middle and end portions of the single crystal were: Hall constant 80 and 3.7 cm<sup>3</sup>/coulomb.

Card 1/2

UDC: 537.311.33

ACC NR: AP7001892

resistivity  $5 \cdot 10^{-3}$  and  $4.9 \cdot 10^{-4}$  ohm·cm, electron concentration  $7.8 \cdot 10^{16}$   
and  $1.7 \cdot 10^{18}/\text{cm}^3$ , and mobility 16,000 and 7,650  $\text{cm}^2/\text{v}\cdot\text{sec}$ . Orig. art. has:  
1 figure and 1 table.

SUB CODE: 20/ SUBM DATE: 20Dec65/ ORIG REF: 003/ OTH REF: 006/ ATD PRESS: 5111

Card -2/2

SHMARUK, L.G. (Kiev).

Reorganization of the structure of pharmacy administration. Apt.  
dela 3 no.1:8-11 Ja-F '54.  
(MLRA 7:1)  
(Pharmacy)

SHMARUK, L.G., provizor

Twice distilled water. Apt. delo 4 no. 2:40-41 Mr-Ap '55. (MLRA 8:5)

1. Iz Tsentral'noy nauchno-issledovatel'skoy aptechnoy laboratorii  
GAPU Ministerstva zdravookhraneniya USSR.

(WATER,  
distillation, double)

SHMARUK, L.G. (Kiyev)

Some problems in increasing labor productivity and quality of  
pharmacy production. Apt.delo 5 no.5:38-40 S-0 '56. (MIRA 9:11)  
(PHARMACY)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0

SHMARUK, L.G. (Kiyev)

Planning buildings for drugstores. Apt. delo 7 no.1:32-34 Ja-V '58.  
(DRUGSTORES) (MIRA 11:3)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0"

SHMARUK, L.G.

Material responsibility of the brigade in pharmaceutical enterprises  
of the Ukrainian S.S.R. Apt. delo 10 no. 2:60-62 Mr-Ap '61.  
(MIRA 14:4)

1. Tsentral'naya nauchno-issledovatel'skaya aptechnaya laboratoriya  
Glavnogo aptechnogo upravleniya Ministerstva Zdravookhraneniya USSR  
(dir. M.N. Bushkova).  
(DRUGSTORES)

SHMARUK, L.G. [Shmaruk, L.H.]; ZAGOROVSKAYA, L.T. [Zahorovs'ka, L.T.]

Efficient planning of drug requisitions as a guarantee for better medicinal services to the population. Farmatsev. zhur. 19 no.6: (MIRA 18:4)  
3-8 '64.

1. Tsentral'naya nauchno-issledovatel'skaya aptechnaya laboratoriya  
Glavnogo aptechnogo upravleniya Ministerstva zdravookhraneniya UkrSSR.

SPIVAK, F. I., SHMARUK, L. C.

Prospects of the development of pharmacy in the Ukraine in  
1965 - 1970. Ipt. file 14 no. 687-10 N-D '65.  
(MIRA 18:12)

1. Tsentral'naya nauchno-issledovatel'skaya aptechnaya  
laboratoriya glavnogo upravleniya UkrSSR, Kiev.  
Submitted March 1, 1965.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0

SHMAR'YAN, A. S.

(DECEASED)

1963/3

c. 1961

MEDICINE -  
psychopathology

see ILC

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0"

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0

SHMAR'YAN, I.M., student III kursa; RUDENKO, N.F., prof., doktor

Power diagram of differential mechanisms, taking into account  
the centrifugal force of inertia and the gyroscopic effect of  
blocks of pinions. Nauch. rab. stud. GNSO MGI no. 7:194-200  
(MIRA 14:5)  
1959.

(Gearing)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0"

88744

S/166/60/000/006/004/008  
C111/C222

9,410 (110, 114-1, 132-1)

AUTHORS: Vasil'yev, K.P., Kamardin, I.F., and Shmar'yan, M.

TITLE: Investigation of the Migration of the Electrode Material in a  
Ratio Tube With an Oxide - Coated CathodePERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-  
matematicheskikh nauk, 1960, No. 6, pp. 53 - 62

TEXT: The authors investigate migration phenomena in the double triode 6 H 3 П (6NZP) with a bantam construction. The parts of the investigated bantam radio tube were radiated with thermal neutrons, in a nuclear reactor and thereby they were made radioactive. About 50-60 days after the radiation when short-life isotopes ( $Au^{198}$ ,  $Mg^{28}$  and others) were decayed, such a radioactive structural element was installed in the tube 6 NZP. Then the activity generated by this element in other parts of the tube was measured. The results of the measurements have only a qualitative character. It was stated : The material of the core of the heater, in the case in question it was tungsten, migrated to most of the elements of the tube : on the cathode, net, anode, mica insulators, etc. The material of

C8 Card 1/2

2025 RELEASE UNDER E.O. 14176

SHMATALYUK, V.

Winter navigation in foreign ports. Mor.flot 26 no.1:

43-44 Ja '66.

(MIRA 19:1)

1. Glavnyy inzhener proyekta Otdela ekonomiki i ekspluatatsii  
morskogo transporta Dal'morniiprojekta.

RYABKOV, A.; MONAKHOV, A.; SHMATCHENKO, A., starshiy ekonomist; SUZDAL'TSEVA, V.,  
starshiy ekonomist

Efficiency of new calculating machines. Den. i kred. 20 no. 7:48-54  
(MIRA 15:7)  
Jl '62.

1. Glavnnyy bukhgalter Kostromskoy oblastnoy kontory Gosbanka (for  
Ryabkov). 2. Starshiy inspektor glavnoy bukhgalterii Kalininskoy  
oblastnoy kontory Gosbanka (for Monakhov). 3. Glavnaya bukhgalteriya  
Kurskoy oblastnoy kontory Gosbanka (for Shmatchenko). 4. Glavnaya  
bukhgalteriya Uzbekskoy respublikanskoy kontory Gosbanka (for Suzdal'-  
tseva).

(Banks and banking--Accounting) (Machine accounting)

SHMATCHENKO, V.F.

## PHASE I BOOK EXPLOITATION

SOV/5918

Petrov, Andrey Nikolayevich and Vladimir Filippovich Shmatchenko  
Polosovyye elektromekhanicheskiye fil'try radiochastot (Electro-  
mechanical Radiofrequency Band-Pass Filters) Moscow, Gosener-  
goizdat, 1961. 299 p. 6500 copies printed.

Ed.: P.Ya. Bergman; Tech. Ed.: O.S. Zhitnikova.

PURPOSE: This book is intended for scientific personnel and engineers working in the fields of telephone, telegraph, and radio engineering. It may also be useful to advanced students specializing in related subjects at schools of higher education.

COVERAGE: The book deals with the theory, the design calculation, and the technological manufacturing processes of electromechanical oscillating systems used in radio engineering, principally electromechanical i-f filters operating in the 50 kc to 1 Mc range. Problems of adjusting, regulating, and testing electromechanical filters are also discussed. The authors thank D.N. Shapiro,

Card 1/4

Ch. III. Electromechanical Analogs	72
Ch. IV. Magnetostriction	88
APPROVED FOR RELEASE: 08/23/2000	105
Ch. IV. Magnetostriction	105

Card 2/4

S/106/62/000/008/001/009  
AC55/A101

Analysis of the integrator of rectangular ....

which is the equation of the static resonance characteristic. On the basis of (21), the authors calculate the ordinates corresponding to the minima and maxima of the dynamic characteristic. They next give the formula for the effective dynamic frequency-band of the integrator:

$$\Delta f_{\text{eff } \tau} = \int_{-\infty}^{\infty} y^2 (\Delta f)_{\tau} d\Delta f = \int_{-\infty}^{\infty} \frac{1 - 2 e^{-2\gamma} \cos 2\pi \Delta f \tau + e^{-4\gamma}}{[1 + (\pi \frac{\Delta f \tau}{\gamma})^2](1 - e^{-2\gamma})^2} d\Delta f . \quad (28)$$

This formula shows that, at an unlimited narrowing of the static band, the dynamic frequency-band of the integrating circuit tends towards the effective frequency-band of the ideal integrator. The excess of the signal over the interferences at the output of the integrating circuit is:

$$h_{\text{integr}}^2 = \frac{a_0^2}{2 v_0^2 \Delta f_{\text{eff } \tau}} = \frac{a_0^2 \tau}{2 v_0^2} \frac{1}{\gamma} \frac{1 - e^{-2\gamma}}{1 + e^{-2\gamma}} = Q^2 \frac{1}{\gamma} \frac{1 - e^{-2\gamma}}{1 + e^{-2\gamma}}, \quad (32)$$

where  $Q^2 = h^2$  is the limit-value of the excess, and  $a_0$  is the input signal ampli-

Card 3/4

Analysis of the integrator of rectangular ....

S/106/62/000/008/001/009  
A055/A101

tude. The analysis of the curve showing the dependence of  $\frac{h^2_{\text{integr}}}{h^2}$  on  $\gamma$  permits formulating the requirements set upon the parameters of the single oscillating circuit. The ratio of the amplitudes at the beginning and the end of the damping of the oscillations is  $k = e^{\alpha_{\Sigma} \Delta \tau_{\text{damp}}}$ , where  $\alpha_{\Sigma} = \alpha_1 + \alpha_2$  ( $\alpha_1$  being the attenuation of the circuit in the integration period, and  $\alpha_2$  the additional attenuation for the damping of the oscillations), and  $\Delta \tau_{\text{damp}}$  is the damping time. Designating by  $\Delta f_{\text{eff } \Sigma}$  the effective frequency-band of the circuit in damping operation, the authors write:  $\ln k = 2 \Delta f_{\text{eff } \Sigma} \Delta \tau_{\text{damp}}$ , or (replacing

$$\Delta f_{\text{eff } \Sigma} \Delta \tau_{\text{damp}} \text{ by } \Delta \gamma_{\Sigma}): \quad \Delta \gamma_{\Sigma} = \frac{\ln k}{2}. \quad (36)$$

A graph illustrates the dependence (36). The Soviet personalities mentioned in the article are: V.A. Kotel'nikov, I.S. Gonorovskiy. There are 11 figures.

SUBMITTEE: January 13, 1962

Card 4/4

RYBASOV, Vsevolod Aleksandrovich; SIMATIKOV, Mikhail Dmitriyevich;  
LAGUTINA, Ye.V., red.; NAZAROVA, A.S., tekhn. red.

[Personal hygiene] Lichnaia gigiena. Moskva, Izd-vo "Znanie,"  
1962. 38 p. (Narodnyi universitet kul'tury: Fakul'tet zdro-  
rov'ia, no.9) (HYGIENE)

KORCHAK, Nina; SHMATK, Yu.G., kandidat sil's'kogospodars'kikh nauk, redaktor;  
FRANCHUK, V.P., redaktor

[Our work practice for increasing egg production] Nash dosvid roboty po  
pidvyshchenniu nasuchosti kurei. Kyiv, 1956. 21 p. (Tovarystvo dlia  
poshurennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser. 2,  
no.18) (MLRA 10:1)

1. Ptashnitsya kolgospu "Komunar," Ruzhichnyans'kogo rayonu,  
Khmel'nits'koi oblast (for Korchak)  
(Eggs--Production)

SHMATKO, A.D.

Introducing machines for thinning sugar-beet seedlings.  
Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i  
tekh.inform. 18 no.11:37-39 N '65.

(MIRA 18:12)

SHMATKO, A.D.

Six-row planting machine. Biul. tekhn.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekhn. inform. 18 no. 12:31-32 D '65  
(MIRA 19:1)

ANDREEV, A.A.; SHMATKO, A.G.

Starting up and operating the Zhulin intermediate station of the  
"Druzhba" Petroleum Pipeline. Neft.khoz. 42 no. 4; 59-64 Ap '64.  
(MIRA 17:9)

SHMATKO, A.Ya., inzh.

Organization of operations in building the "Druzhba" oil pipeline.  
Stroi. truboprov. 6 no. 5:3-4 My '61. (MIRA 14:7)

1. Trest Ukrugazneftstroy, Kiyev.  
(Petroleum—Pipelines)

ACC NR: AP7002170

SOURCE CODE: UR/0089/66/021/006/0511/0512

AUTHOR: Subbotin, V. I.; Ivanovskiy, M. N.; Arnol'dov, M. N.; Shmatko, B. A.; Pleshivtsev, A. D.

ORG: none

TITLE: Control of the content of oxygen and hydrogen impurities in molten sodium by measuring the electric resistance

SOURCE: Atomnaya energiya, v. 21, no. 6, 1966, 511-512

TOPIC TAGS: liquid metal, resistivity, hydrogen, oxygen, gas analysis

ABSTRACT: In view of the conflicting data in the literature concerning the dependence of the electric resistance of liquid sodium on its oxygen content, the authors measured with a dc double bridge the resistivity of sodium at 350°C as a function of the oxygen and hydrogen concentrations. The hydrogen and the oxygen were introduced into the circulating liquid sodium in gaseous form. The amount of introduced gas was determined by measuring its pressure in a vessel of known volume kept at a given temperature. The chemical compositions of the sodium, oxygen, and hydrogen employed are given. The results show that oxygen does not change the resistance of liquid sodium, accurate to  $5 \times 10^{-8}$  ohm, but the resistivity does change linearly with increasing hydrogen concentration. Consequently, by measuring the electric resistivity of liquid sodium it is possible to monitor the hydrogen content with accuracy  $3 \times 10^{-5\%}$  by weight, but the oxygen content cannot be monitored. Orig. art. has: 1 figure and 1 table.

SUB CODE: 20/ SUBM DATE: 23Jun66/ ORIG REF: 001/ OTH REF: 003

Card 1/1

UDC: 621.039.534.6

LAVROW, V.P.; LYAMIN, E.A.; PARAMONOV, A.N.; ROMANOV, B.M.; SHMATKO, B.A.

Apparatus for sight-guided trawling within various depths. *Okeanologiya*  
3 no.1:137-142 '63. (MIRA 17:2)

1, Kalingradskoye otdeleniye Morskogo gidrofizicheskogo instituta AN  
SSSR.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0

PAKA, V.T.; NAUMENKO, M.F.; TATARENKO, Ye.V.; CHIGRAKOV, K.I.; SHMATKO, B.A.

Recording electrothermabathysonde with cable communication  
lines. Trudy Inst. okean. 74:62-66 '65. (MIRA 18:12)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549730002-0"

L 36071-66 EWT(1) GW  
ACC NR: AT6017052

(N)

SOURCE CODE: UR/2566/65/074/000/0062/0066

31  
3+1

AUTHOR: Paka, V. T.; Naumenko, M. F.; Tatapenko, Ye. V.; Chigrakov, K. I.; Shmatko,  
B. A.

ORG: none

TITLE: Electrical thermobathygraph with cable connection

SOURCE: AN SSSR. Institut okeanologii. Trudy, v. 74, 1965, Elektronnyye pribory dlya  
okeanologicheskikh issledovaniy (Electronic instruments for oceanological research),  
62-66

TOPIC TAGS: measuring device, heat measurement, ocean property

ABSTRACT: An instrument for measuring temperature and depth of the upper reaches of the sea is discussed. The apparatus has two separate channels, each consisting of a dc bridge. The temperature probe, a thermistor with a resistivity of  $1.3 \text{ k}\Omega$  at  $20^\circ\text{C}$ , forms one arm of the bridge and the remaining three arms (consisting of fixed and variable resistors) balance fluctuations of the galvanometer. The depth probe (in the form of an electrical membrane) is connected to its bridge in the same manner. Both measurements are made with a single meter which is switched manually from one bridge to the other. A schematic of the instrument is given and the mounting of each probe is de-

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1. 36071-66

ACC NR: AT6017052

scribed and sketched. Tests show that the accuracy of temperature measurement is 0.10° and that of depth measurement is 0.5 m. Orig. art. has: 3 figures.

SUB CODE: 09,14/ SUBM DATE: none/ ORIG REF: 002

Card 2/2 vmb

*Shmatko, G.I.*

PETROV, O.V.; SHMATKO, G.I.

Distribution and numbers of murine rodents in the forest steppe  
deciduous forest stands of commercial importance [with summary in  
English]. Zool.zhur. 36 no.5:762-772 My '57. (MIRA 10:7)

1. Kafedra zoologii pozvonochnykh Leningradskogo gosudarstvennogo  
universiteta im. A.A. Zhdanova.  
(Forest fauna) (Mice)

L 18433-66 EWT(1)/T IJP(c) GG  
ACC NR: AP6007796

SOURCE CODE: 1435/66/011/002/0171/0176

AUTHOR: Konozenko, I. D.; Muzalev's'kyy, Ye. O.—Muzalevskiy, Ye. .; Rovna,  
A. I.—Rovnaya, A. I.; Galushka, O. P.—Galushka, A. P.; Shmatko, H. H.—Shmatko,  
G. G.; Nikolayeva, L. H.—Nikolayeva, L. G.

ORG: Institute of Physics, AN URSR, Kiev (Instytut fizyky AN URSR)

TITLE: Preparation of single CdS crystals and their structural and physical  
properties

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 2, 1966, 171-176

TOPIC TAGS: single crystal, crystal lattice, crystal property, x-ray analysis,  
photoconductivity, crystal lattice defect

ABSTRACT: A procedure for obtaining large single crystals of CdS by the zone  
sublimation method is described. X-ray investigations of the defects in the  
structure of these crystals were carried out. It was shown that they are more  
perfect than those previously obtained (I. D. Konozenko, V. I. Ust'yanov, same  
source, v. 5, no. 5, 1960). The electrophysical properties were analyzed and the  
existence of a wide photoconductivity maximum was found. The depth of bedding and  
of trapping level concentrations were determined. On the basis of these investi-  
gations, it is possible to obtain purer single crystals of the  $A_2B_6$  type compounds  
with an improved lattice by perfecting the technology. Orig. art. has: 6 figures.  
Card 1/2

L 18433-66 APPROVED FOR RELEASE: 08/23/2000 SUBM DATE: 14Mar65/ ORIG REF: 006/  
ACC NR: AP6007796 CIA/RDP86-00513R001549730002-0

SUB CODE: 20

FW  
Card 2/2

SHMAT' KO, I. G.

M

USSR / Cultivated Plants. Plants for Technical Use. Oil  
Plants. Sugar Plants.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34771

Authors : Vlasyuk, P. A.; Shmat'ko, I. G.  
Inst : All-Union Scientific Research Institute for Sugar Beets  
Title : Effects of Liquid Nitric Fertilizers on Seed Productivity.

Orig Pub : Sakharnaya svekla, 1957, No 6, 17-19

Abstract : Crop experiments conducted during the year 1956 by the All-Union Scientific Research Institute for Sugar Beets at the Kapitonovskiy sugar combine in the district of Cherkasskaya Oblast over an area of 18 hectares on medium-leached black earth ascertained the relative effects of liquid and solid nitric fertilizers, used on phosphate-potassic bases, on the productivity of sugar beet transplantation. To one hectare were added: potash salt (32% K<sub>2</sub>O) 1 hwt; super-phosphate 2.7 hwt; nitric acid of ammonia 1 hwt. All fer-

Card 1/2

SHMAT'KO, I.G., cand Agr Sci --(disc) "Effect of organic and mineral  
fertilizing <sup>and</sup> mixtures <sup>on</sup> the yield and quality of sugar beet seeds." Kiev, 1959.  
10 pp (Min of Agr USSR. Ukrainian Acad of Agr). 150 copies  
(VI, 37-59, 110)

63

30(1)

SOV/21-59-4-20/27

AUTHORS: Vlasyuk, P.A., Member of the AS UkrSSR and of the  
VASKhNIL; and Shmat'ko, I.G.

TITLE: Effect of Nutrition Conditions on the Physiological  
Processes and Productivity of Sugar Beet Transplants

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 4,  
pp 429-433 (USSR)

ABSTRACT: The authors studied the effect of various conditions  
of nutrition, created by introduction of organic and  
mineral fertilizing mixtures, on the physiological  
processes and productivity of sugar beet transplants,  
on five specimens of transplants, in 1957-58.  
Every transplant was put in a pot with 32 kg of earth.  
The fertilizing mixtures for each plant consisted of  
250 g semi-rotten manure, 10 g superphosphate, 5 g  
ammonium nitrate, 10 g manganese sludge and 15 g  
faeces. The experiments have established that ad-  
mixing of above-named fertilizer had good effect on  
the physiological processes of metabolism. The plants

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SCV/21-59-4-20/27

Effect of Nutrition Conditions on the Physiological Processes  
and Productivity of Sugar Beet Transplants

Showed considerable rise in the intensity of photo-synthesis and respiration, growth, development and productivity; the weight of the sugar beet seed balls increased. The best assimilation was shown by the transplant treated with a mixture of manure, super-phosphate and ammonium nitrate. The same plant showed particular development of its leaves. The transplant treated with a mixture of manure, superphosphate and manganic sludge showed stronger stalk and larger beet seed balls. The admixture of faeces decreased the intensity of the photosynthesis. The photosynthesis study was made by Kh.M. Pochinsk. There are 5 tables and 1 photo.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut fiziology rasteniy (Ukrainian Scientific Research Institute of Physiology of Plants)

SUBMITTED: January 20, 1959

Card 2/2

SOV/21-59-6-24/27

30 (1)

Shmat'ko, I. N. (Shmat'ko, I.G.)

AUTHOR:

Effects of Organo-Mineral Mixtures on the Quality of Sugar  
Beet SeedsPERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1959, Nr 6, pp 675 -  
677 (USSR)

ABSTRACT: The author studied the effect of organo-mineral mixtures on the quality of sugar beet seeds. The study was conducted on a 300m<sup>2</sup> area in the Kozhanskiy sakhariny kombinat (Kozhanskiy Sugar Combine), Kiyevskaya oblast', in 1956 - 57. The mixtures were made in the following proportions: semi-over-rotten manure ~ 5 tons/hectare, superphosphate - 200 kg/hectare, excreta ~ 300 kg/hectare, manganese sludge ~ 200 kg/hectare. The quantity of the nutrient elements in the balls of sugar beet seedlings was raised, especially after the introduction of a mixture containing manure and superphosphate and manure-superphosphate-manganese sludge. The best seeds were obtained from sugar beets treated with manure-superphosphate-manganese sludge. Results of the study are compiled in

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SOV/21-59-6-24/27

Effects of Organo-Mineral Mixtures on the Quality of Sugar Beet Seeds

5 tables.

There are 5 tables and 4 Soviet references.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut fiziologii rasteniy (Ukrainian Scientific Research Institute of the Physiology of Plants)

PRESENTED: By P. A. Vlasyuk, Member of the AS UkrSSR and of VASKhNIL

SUBMITTED: January 20, 1959

Card 2/2

PROTSENKO, D.F.; SHMAT'KO, I.G.

Characteristics of the water balance of winter wheat. Bot.zhur. 48  
no.2:211-215 F '63. (MIRA 16:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii rasteniy,  
Kiyev.  
(Ukraine—Wheat—Water requirements)

GILEVICH, Yu.S., prog.; IZOTOVA, A.Z., kand. med. nauk; SHMAT'KO, I.G.;  
YEVSTAI'YEVA, T.N.; SHALYGINA, T.P., student

Diagnostic importance of Casoni's intracutaneous allergic reaction  
in echinococcosis. Uch. zap. Stavr. gos. med. inst. 88165-  
171 '63  
(MIRA 1787)

i. Kafedra obshchey khirurgii (zav. - prof. Yu.S.Gilevich)  
Stavropolskogo meditsinskogo instituta (rektor zasluzhennyj  
deyatel nauki, prof. V.G. Badylin).

SHEVTSKO, I. G. [Shevtsko, I. G.]; OSTAPLYUK, Ye. D. [Ostaplyuk, Ye. D.]

Physiological characteristics of frost-and drought-resistant  
winter wheat. Ukr. bot. zhur. 21 no. 5:28-32 '64.  
(MIRA 18:2)

1. Institut fiziologii rasteniy AN UkrSSR, Kiyev.

NUDNER, T.K., dotsent; IZOTOVA, knad. med. nauk; ZHENETL', D. Kh.; PIROZHKOVA, L.A.; SHKARUPELOV, A.A.; SHMAT'KO, I.T.; YANNIKOVA, G.M.

Echinococcosis of the liver. Uzh. zap. Stavr. gos. med. inst.  
(MIRA 17:7)  
8: 30-48 '63

1. Kafedra obshchey khirurgii (zav. kafedrov - prof. Yu.S. Gilevich) Stavropol'skogo meditsinskogo in-tute (rektor zasluzhennyy deyatel' nauki, prof. V.G. Budylin, 2-ye khirurgicheskoе otdeleniye Stavropol'skoy krayevoy klinicheskoy bol'nitsy (glavnyy vrach Yu.P. Zotov) i khirurgicheskoye otdeleniye Pyatigorskoy bol'nitsy (zav. otdel. zasluzhennyy vrach RSFSR I.I. Toshinskiy).

LITVAK, T.G.; SIMAT'KO, I.T.; KHUBIYEV, A.M.

Echinococcosis of the kidneys and the retroperitoneal space.  
Uch. zap. Stavr. ges. med. inst. 8:94-110 '63 (MIRA 17:7)

1. K'ledra obshchey kirurgii (zav. kafedroy - prof. Yu.S. Gilevich) Stavropol'skogo meditsinskogo instituta (rektor zasluzhennyy deyatel' nauki prof. V.G. Budylin).

SEMAT'KO, I.T.; SHELEGEDA, A.S., student

Echinococcosis of the spleen. Uch. zap. Stavr. gos. med. inst.  
8:111-118 '63  
(MIRA 17:7)

1. Kafedra obshchey khirurgii (zav. - doktor med. nauk Yu.S. Gilevich) Stavropol'skogo meditsinskogo instituta (rektor zasluzhennyy deyatel' nauki, prof. V.G. Budylin).

SHMAT'KO, I.T., klinicheskiy ordinator

Hydatids of the spleen. Uch. zap. Stavr. gos. med. inst.  
12:198-199 '63. (MIRA 17:9)

I. Kafedra obshchey khirurgii (zav. prof. Yu.S. Gilevich  
Stavropol'skogo gosudarstvennogo meditsinskogo instituta.

VEREYUTIN, Yu.M.; ZHENCHENKO, G.P.; SHMAT'KO, I.Z.

Literature on echinococcosis. Uch. zap. Statv. ges. med. Inst.  
88256-290 '63  
(MPRA 1963)